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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/803,721	03/09/2001	Harry W. Schmidt	T268.12-0041	9002

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EXAMINER

CROSS, LATOYA I

ART UNIT

PAPER NUMBER

1743

DATE MAILED: 06/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/803,721	Applicant(s) SCHMIDT ET AL	
	Examiner LaToya I. Cross	Art Unit 1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 19 and 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/03; 11/02</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of group I, claims 1-18, in the paper dated April 6, 2004 is acknowledged. Claims 19 and 20 are withdrawn from consideration.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 6 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by SU 1007968 (abstract provided) to Khachatury.

Khachatury teaches a gripper assembly comprising a pair of gripper jaws (3) hinged at their stem. Permanent magnets (5) are located at the stem of each of the gripper jaws, with opposite poles facing each other causing the stems to be attracted to each other and jaws themselves to open. The gripper assembly also comprises a pneumatic cylinder (air cylinder) actuator, shown in figure 1. The actuator may also be a solenoid (10), shown in figure 3. The reference teaches that when the actuator is switched on, a repelling force is created between the piston and the jaw stems, forcing the stems to repel each other and the jaws to close on the object (9) being gripped.

It is noted that the abstract of the Khachatury does not teach that the gripper is used in a vial autosampler, however, in the manner in which the claims are written, the autosampler appears to be merely Applicants' intended use. The body of the claim itself appears to be directed only to a gripper mechanism.

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Therefore, for the reasons set forth above, Applicants' claimed invention is deemed to be anticipated, within the meaning of 35 USC 102(b) in view of the teachings of Khachatury.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over SU 1007968 (abstract provided) to Khachatury.

Khachatury discloses a gripper assembly comprising a pair of gripper jaws (3) hinged at their stem. Permanent magnets (5) are located at the stem of each of the gripper jaws, with opposite poles facing each other causing the stems to be attracted to each other and the jaws themselves to open. The gripper assembly also comprises a pneumatic cylinder (air cylinder) actuator, shown in figure 1. The actuator may also be a solenoid (10), shown in figure 3. The reference discloses that when the actuator is switched on, a repelling force is created between

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the piston and the jaw stems, forcing the stems to repel and the jaws to close on the object (9) being gripped.

Khachatury differs from the invention of claim 4 in that Khachatury teaches the actuator (pneumatic cylinder or solenoid) causes the jaws to close. Claim 4 recites that the actuator causes the jaws to open. It would have been obvious to one of ordinary skill in the art to switch the magnets of Khachatury (by using the opposite-facing poles in the actuator and like-facing poles on the jaw stems) to reverse the operation of the gripper assembly to provide a gripper assembly that is biased to the closed position, in instances where it is necessary that the gripper maintain a constant hold on the objected being gripped.

Khachatury differs from the invention of claim 5 in that there is no disclosure of the jaws being formed of non-magnetic material. However, it would have been obvious to one of ordinary skill in the art to use non-magnetic material to make the jaws of the gripper assembly because using magnetic material would cause interference in the attraction/repelling of the magnets used to open and close the jaws.

Therefore, for the reasons set forth above, claims 4 and 5 are deemed to be obvious in view of the teachings of Khachatury.

7. Claims 8-12 rejected under 35 U.S.C. 103(a) as being unpatentable over Khachatury in view of US application publication 2001/0028175 to Thompson et al.

The disclosure of Khachatury is described above. Khachatury differs from the instant invention, with respect to claims 8-12, in that there is no disclosure of the actuator being a rotary motor and having drive rods.

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Thompson et al teach an automatic gripper assembly comprising jaws (18), a pair of slides (32) and a drive assembly (34). The drive assembly comprises a reversible rotary motor (80), drive rod (82). The rotary motor is preferably an electric motor, although other motors, such as air powered, may be used (p. 2, ¶ 0027). A pair of drive rods (82) is shown in figure 3. Thompson et al teach that the motor and drive rods allow the movement of the gripper to be synchronized (p. 3, ¶ 0031). Thompson et al teach that the jaws are mounted to slides (32) by suitable fasteners (36). Depending on the type of fastener, the jaws can be exchanged.

It would have been obvious to one of ordinary skill in the art use an electric motor and drive rods, in place of the pneumatic cylinder actuator of Khachatury, to provide a gripper assembly that insures synchronous movement of the jaws, without additional synchronization means. Further, it would have been obvious to one of ordinary skill in the art to use fasteners to attach the jaws to the gripper assembly to allow the jaws to be changed when necessary.

Therefore, for the reasons set forth above, claims 8-12 are deemed to be obvious in view of the teachings of Khachatury and Thompson et al.

8. Claims 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Khachatury in view of US application publication 2002/0151076 to Anderson et al.

The disclosure of Khachatury is described above. Khachatury differs from the instant invention, with respect to claim 13, in that there is no disclosure of using rare earth magnets in the gripper assembly. With respect to claims 14-16, Khachatury does not disclose a friction portion on the gripper assembly.

Anderson et al teach a gripper (52) comprising a first jaw (54) and a second jaw (56) and several magnets (137) on the edge of the jaws to bias the jaws together (figures 7 and 8).

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Anderson et al teach that rare earth metals are suitable for the magnets (p. 8 ¶ 0137). It would have been obvious to one of ordinary skill in the art to use rare earth magnets in the gripper assembly of Khachatury to provide a magnetic attraction strong enough to maintain the jaws closed on the object being held.

With respect to the friction portion, Anderson et al teach that the gripping edges of the jaws (54, 56) include an abrasive material or a compressible foam of polymeric material to assist in the gripping and to help in applying a uniform pressure against the object being gripped (p. 8, ¶ 138). It would have been obvious to one of ordinary skill in the art to incorporate a compressible polymeric material onto the gripping edges of the jaws of the gripping assembly of Khachatury to help maintain a suitable hold on the object being gripped.

Therefore, for the reasons set forth above, claims 13-16 are deemed to be obvious in view of the teachings of Khachatury and Anderson et al.

9. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Khachatury and Anderson et al as applied to claims 13-16 above, and further in view of US Patent 6,221,083 to Mayer.

Khachatury and Anderson et al are described above. Neither reference discloses using diamond tape for the friction portion of the gripper assembly.

Mayer teaches a forceps assembly (gripper) used in surgical application. Mayer teaches diamond-studded jaw gripping surfaces for anti-skidding friction against an object being gripped (col. 5, lines 40-47). Given the teaching of using diamond studded surfaces to provide anti-skidding friction, it would have been obvious to one of ordinary skill in the art to use

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diamond surfaces in the gripper assembly of Anderson et al to provide an extra means of assuring a good grip on the object being held.

Therefore, for the reasons set forth above, claims 17 and 18 are deemed to be obvious in view of the teachings of Khachatury and Anderson et al in view of Mayer.

Citation of Relevant Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent 4,848,192 teaches that rubber provides a superior gripping strength by forming a frictional gripping surface.

US Patent 6,468,475 to Geonner et al teaches an autosampler comprising a gripper assembly having fingers (72, 74, 76) that are biased to the closed position, wherein magnetic means may be used to open and close the fingers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaToya I. Cross whose telephone number is 571-272-1256.


The examiner can normally be reached on Monday-Friday 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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